

Algebra
Chapter 3 Review

Name _____

1. Graph $\frac{6}{7}$ on a number line.

[1] _____

2. Solve the equation: $\frac{x}{7} = 8$

[2] _____

3. In 2 hours a candymaker can produce 80 boxes that each contain 10 pieces of candy. How many pieces of candy does the candymaker produce in 6 hours?

[A] 2400

[B] 480

[C] 600

[D] 4800

[3] _____

4. Solve the equation: $2x - |-5| = 23$

[4] _____

Solve:

5. $3x + 9 = 27$

[5] _____

6. $-5n + 18 + 3n = 34$

[6] _____

7. $-3x + 21 + 5x + 21 = -6$

[A] -18

[B] 24

[C] -24

[D] 18

[7] _____

Solve the equation:

8. $5n - 2(n - 2) = +11$

[8] _____

9. $4n - 2(3 - n) = +13$

[9] _____

Solve the equation:

10. $\frac{y+1}{2} = 9$

[10] _____

11. $\frac{x}{2} + \frac{x}{4} = 5$

[11] _____

Solve:

12. $\frac{5}{19}y - 35 = 0$

[12] _____

13. $\frac{9x}{3} + 11x = 28$

[13] _____

Solve the equation:

14. $6z + 3 = 8z - 5$

[14] _____

15. $3 - 4z = -5 + 8z$

[15] _____

Solve:

16. $3x - 4 = x - 2$

[16] _____

Solve:

17. $5x - 3 = x - 6$ [A] $\frac{3}{4}$ [B] $\frac{2}{5}$ [C] $-\frac{4}{3}$ [D] $-\frac{3}{4}$

[17] _____

18. $x + 9 = -3x - 4$

[18] _____

Solve the equation:

19. $5x + 14 - 2x = 9 - (4x + 2)$

[19] _____

20. $3x + 17 - 5x = 12 - (6x + 3)$

[20] _____

21. One video rental club charges \$25 to become a member and \$2.50 to rent each video. Another charges no membership fee, but charges \$3.25 to rent each video. How many videos must you rent to make the first club more economical?

[21] _____

22. One hiking club charges \$20 to become a member and \$5 to participate on each hike. Another club charges no membership fee, but charges \$7 to participate on each hike. How many hikes must you go on to make the first club more economical?

[22] _____

23. The sales tax rate in a certain state is 3%. Find the total price paid for a pair of shoes that costs \$44.

[A] \$1.32 [B] \$13.20 [C] \$47.62 [D] \$45.32

[23] _____

24. An article regularly selling for \$56.15 is advertised at 40% off. Find the sale price.

[A] \$78.61 [B] \$33.69 [C] \$22.46 [D] \$53.90

[24] _____

25. The simple interest I on an investment of P dollars at an interest rate r for t years is given by $I = Prt$. Find the time it would take to earn \$1700 in interest on an investment of \$28,000 at a rate of 4.4%.

[25] _____

26. Write the equation as a function of t : $6 = t + 7s$

[26] _____

27. Write $5x - 2y = 5$ as a function of y .

[27] _____

28. Brandon drives 119 miles in one week. How many miles does he drive in one day on average?

[A] 17 miles

[B] 24 miles

[C] 126 miles

[D] 27 miles

[28] _____

29. A motorist travels 632 miles. Assuming the car averages 29.3 miles per gallon, how many gallons of gasoline (to the nearest tenth of a gallon) were used?

[29] _____

30. What is the salesperson's commission on a \$600 sale if the commission rate is 20%?

[A] \$12

[B] \$12,000

[C] \$612

[D] \$120

[30] _____